

Region 2 Office 3201 Spurgin Road Missoula, MT 59804-3099 October 29, 2002

Governor's Office, Attn: Todd O'Hair, PO Box 200801, Helena, MT 59620-0801 Environmental Quality Council, PO Box 201704, Helena, MT 59620-1704 \*Dept. of Environmental Quality, PO Box 200901, Helena, MT 59620-0901

\*Dept. of Natural Resources & Conservation, POB 201601, Helena, MT 59620-1601 \*Montana Fish, Wildlife & Parks:

Website, Commission Secretary, Division Secretaries, Regional Office Managers \*State Historic Preservation Office, PO Box 201202, Helena, MT 59620-1202

\*MT State Library, PO BOX 201800, Helena, MT 59620-1800

Jim Jensen, MT Environmental Information Center, POB 1184, Helena, MT 59624-1184 MT Audubon, PO BOX 595, Helena, MT 59624-0595

MT Audubon, PO BOX 595, Helena, MT 59624-0595

Deer Lodge Valley Conservation District, 1 Hollenback Road, Deer Lodge, MT 59722

Granite County Conservation District, PO Box 926, Philipsburg, MT 59858

Environmental Protection Agency, 10 West 15<sup>th</sup> St. #3200, Helena, MT 59626

Army Corps of Engineers, 301 South Park Ave, Drawer 10014, Helena, MT 59626-0014

US Fish and Wildlife Service, 100 North Park Ave. #320, Helena, MT 59601

Western Montana Fish and Game Association, PO Box 4294, Missoula, MT 59806-4294

\*Mailed electronically

#### Dear Ladies and Gentlemen:

The enclosed Environmental Assessment (EA) is for your consideration. It was prepared for the proposed Beaver Creek Channel Reconstruction Project. The project includes channel renaturalization, revegetation of the riparian area and the placement of habitat improvement structures. The project will improve riparian conditions, reduce sediment inputs and improve the channel aesthetics. This project will improve spawning, rearing and overwintering adult habitat and increase bull trout and westslope cutthroat recruitment from the Clark Fork River.

This EA is available for review at FWP's Helena Headquarters, the State Library and Environmental Council in Helena, or on FWP's website at www.fwp.state.mt.us under "Public Notices." Comments will be accepted until 5 P.M. on November 30, 2002. If you have questions, feel free to contact Eric Reiland at 406-542-5520. All comments should be sent to the undersigned. Thank you for your interest.

Sincerely,

Mack Long Regional Supervisor Granith L

# **Beaver Creek EA Checklist for the Beaver Creek Channel Reconstruction Project**

### PART I. PROPOSED ACTION DESCRIPTION

Type of Proposed State Action: <u>Channel Habitat Restoration</u>	
2. Agency Authority for the Proposed Action	on: Montana Fish, Wildlife and Parks
3. Name of Project: Beaver Creek Channel	
4. Name, Address and Phone Number of Pr Eric Reiland, MFWP, 3201 Spurgin Rd., M	- 1 프로마 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
	1880ula, W11. 39804-3099
(406-542-5520)	
5. If Applicable:	
Estimated Construction/Commencement Date: N/A Estimated Completion Date: N/A Current Status of Project Design (% complete)	
6. Location Affected by Proposed Action (Granite County, T8N, R15W, Sec.5,8,9	county, township, range and sections)
7. Project Size: Estimate the number of acr currently:	es that would be directly affected that are
(a) Developed: (d)	Flood plain 10 acres
residential 0 acres	
industrial <u>0</u> acres (e)	Productive:
	irrigated cropland 0 acres
(b) Open Space/Woodlands/	dry cropland <u>0</u> acres
Recreation 0 acres	forestry <u>0</u> acres
10010atton	rangeland0 acres
	Tangerand 0 acres

8. Map/site plan: N/A

(c) Wetlands/Riparian

Areas.....<u>10</u> acres

9. Narrative Summary of the Proposed Action or Project including the Benefits and Purpose of the Proposed Action.

other.....<u>0</u> acres

## **ENVIRONMENTAL ASSESSMENT:**Beaver Creek Channel Reconstruction Project

#### **Background**

Beaver Creek is a tributary to Upper Willow Creek. Beaver Creek is a small, second order tributary with a basin less than 3,200 acres originating in the Beaverhead-Deer Lodge National Forest. The upper basin is primarily forested (spruce fir and lodgepole pine) with few small meadows. Willows and wetland grasses dominate the lower portion of the basin. Beaver Creek supplies agricultural irrigation water to the Upper Willow Creek valley. Beaver Creek's entire stream flow is captured by a dilapidated headgate structure approximately 1.1 miles upstream from its confluence with Upper Willow Creek. The Beaver Creek channel no longer exists for most of this dewatered reach.

Beaver Creek is considered fragmented from the Upper Willow Creek basin because an irrigation canal captures the stream's entire flow. An active stream channel does not exist below the headgate for approximately 0.5-miles (2260 ft.). Below that point, ground water recharging recreates Beaver Creek, although the channel could no longer support Beaver Creek flows. The original Beaver Creek channel has narrowed over time, been altered from reduced bankfull discharges and is extremely degraded from livestock. Upper Beaver Creek is no longer connected to Upper Willow Creek by means of the original channel because of this dewatered condition.

The Beaver Creek irrigation canal travels approximately 1.3 miles before connecting to Bear Creek, but only after a steep degraded canal reach. The steep canal reach is 250 ft. long and with a 21% slope. This steep canal reach was originally considered a complete fish passage barrier, because virtually no pools exist within this reach. The bull trout hybrids found in Beaver Creek suggest connectivity to Upper Willow Creek. Since a Beaver Creek channel does not exist below the diversion point, fish must migrate upcanal. The canal may act as a partial fish passage barrier, excluding most fish.

Fish population surveys were conducted via electrofishing. Fish surveys consisted of single-pass, species composition and catch-per-unit-effort (CPUE). Above the irrigation canal diversion, Beaver Creek contains westslope cutthroat trout, bull trout, eastern brook trout and presumed bull trout X brook trout hybrids (section length = 1050 ft.). No samples were collected below the irrigation structure. Genetic purity has not been confirmed for cutthroat, but they were assumed pure. Cutthroat ranged from 26mm – 297mm with a mean size of 103mm (n = 25, SD 49.6). The cutthroat's small sizes and low densities are typical for headwater streams with populations of competing brook trout and poor quality habitat. The electrofishing sample did not indicate limiting factors but habitat quality and competition with brook trout might contribute to the low cutthroat densities. The cutthroat's maximum size is probably a function of habitat and stream size. Beaver Creek's elevation and severe winter conditions also contribute to a short growing season and limited productivity.

All bull trout captured in Beaver Creek were presumed hybrids. Although visual estimation of genetic purity is difficult with juvenile fish, most Beaver Creek fish carried traits of bull and brook trout (bull trout body form with markings of brook trout). Hybrids ranged from 62mm - 114mm with a mean size of 97mm (n = 24, SD 14.5). All trout captured within the electrofishing section were considered juvenile fish (sexually immature,  $\leq$  age class1). The bull trout X brook trout's small sizes and few fish imply a non-resident fluvial population. If a resident population did exist, then the stream should contain a wider diversity of age classes and several adult (sexually mature >200mm) individuals. Improved connectivity, habitat quality (i.e.- overhead cover, spawning gravels, etc.) and reduction of brook trout densities are critical for maintaining this population.

Habitat was recorded using a modified version of the U.S. Forest Services' R1/R4 Habitat Assessment procedures. Reach boundaries were delineated using the R1/R4 procedures and 7.5 series topographical maps. Reaches began and ended at State Land property boundaries or appropriate breaks in topography.

Habitat parameters in upper Beaver Creek (above irrigation diversion) are in good condition. The channel is stable (100%) with numerous undercut banks. Although this high stability provides low sediment input, fines and small gravels are still present in substrates. Sediment sources might be originating off-site and contaminating the reach's salmonid spawning substrates. Although fast water habitat types (riffles and runs) dominate the channel in this upper area, the pool to riffle ratios are sufficient to provide adequate fish habitat. Large woody debris (LWD) and boulders create most pool habitats with a few pools being created by meanders. Continued LWD recruitment sources are crucial for maintaining this channel's habitat complexity.

Habitat parameters in lower Beaver Creek (below irrigation diversion) are in poor condition. The irrigation diversion has captured the stream's entire stream flow for numerous years. Immediately below the diversion a stream channel no longer exists. Ground water recharging reactivates the stream channel approximately 0.5 miles down valley of the headgate and the lack of discharge has altered the channel's dimensions, patterns and profile. These lower reaches are unstable (<60% stability) with very few undercut banks (<18%). The channel's instability increases sediment inputs resulting in high concentrations of substrate fines. These conditions reduce salmonid spawning success. The pools in these reaches do not provide adequate fish habitat. The channel has little LWD with most pool habitats being created by headcuts and boulders. Reactivation of these reaches without extensive channel modifications would result in an excessive and continuous sediment supply to Upper Willow Creek. The excessive sediment would negatively impact Upper Willow Creek.

#### **Project goals**

The project will reconnect Beaver Creek with Upper Willow Creek, reducing basin fragmentation and improving connectivity. The project will restore a section of Beaver Creek's water quality, aquatic and terrestrial habitats and riparian conditions to a natural,

self-maintaining channel and work toward reducing sediment and nutrients. The restored project area will support both resident and spawning salmonids, enhance trout recruitment to Rock Creek, establish a healthy riparian corridor for fish and wildlife attributes and provide a usable, healthy stream within the project reach. The reconstructed channel will restore the riparian conditions, improve the water table and hydrology of the reach, reduce sediment input and improve channel aesthetics. It will also prevent any further degrading of the channel through unnatural sediment input or loss of riparian vegetation. DNRC and MFWP will develop a grazing management plan that is acceptable to the landowner. The grazing management plan will provide for vegetation in the newly constructed channel to become established and enable the landowner to utilize the forage production of the ranch.

#### **Project objectives**

The overall goal of this project is to reconnect Beaver Creek to Upper Willow Creek and improve fish and wildlife habitat through nutrient and sediment reductions, habitat improvement, increased spawning opportunities and improved water quality. Specific project objectives are:

- Collect fluvial geomorphology, stream and land surface elevation data and
  information that will be used to develop a stream enhancement design that will
  obtain the objective of long-term stream health, habitat improvement, sediment
  transport and natural channel functions in regime with natural sediment and
  bedload movements.
- 2. Reconstruct 1.1 miles of Beaver Creek reconnecting it with Upper Willow Creek.
- 3. Provide at least 10 structures for fisheries habitat.
- 4. Install 2.2 miles of riparian fencing approximately 50 feet from the channel, outside of the current floodplain.
- 5. Improve spawning, rearing and overwintering adult habitat in the project reach of Beaver Creek.
- 6. Plant a minimum of 10 mature willow plants.

#### **Project Elements**

Channel reconstruction will include designing and implementing channel renovation to accommodate increased bankful discharges, installation of habitat structures and grazing management. The designed channel will incorporate changes in valley gradients, substrate types and sinuosity for the appropriate stream type and given geomorphic conditions. Approximately 1.1 miles of channel will need to be either completely constructed or reshaped prior to acceptance of flows. Habitat improvement structures and riparian vegetation will be installed prior to reactivation. Several headcuts exist within the lower stream reach. Channel modification will address these gradient/instability problems.

#### **Project Benefits**

Reconnecting Beaver Creek to Upper Willow Creek will benefit bull trout and westslope cutthroat trout. Channel reconstruction below the irrigation canal will also reduce basin fragmentation. The reconstructed channel will restore the riparian conditions, improving the water table and hydrology of the reach, reducing sediment input and improving the channel aesthetics. This project will improve spawning, rearing and overwintering adult habitat and increase bull trout and westslope cutthroat recruitment from Rock Creek. Channel stability will be increased resulting in decreased sediment inputs to Rock Creek.

#### **Project Scheduling**

The project is expected to require 3 weeks for completion of construction. All project construction related to the stream channel work will be completed under the direct supervision of a fisheries biologist and consulting hydrologist. Spring 2003 is the anticipated time for construction.

#### PART II. ENVIRONMENTAL REVIEW - IMPACTS

 Evaluation of the Impacts of the Proposed Action Including Secondary and Cumulative Impacts on the Physical and Human Environment. Complete the following checklist, adding comments or narrative as necessary.

PHYSICAL ENVIRONMENT	UNKNOWN	NO IMPACTS	IMPACTS MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED	COMMENT INDEX
LAND RESOURCES  Will the proposed action result in:	-			1		
a. Soil instability or changes in geologic substructure?		XX		7		100 (100 (100 (100 (100 (100 (100 (100
b. Disruption, displacement, erosion, compassion, moisture loss, or over-covering of soil which would reduce productivity or fertility?		хх				ENTER OF HER
Destruction, covering modification of any unique geologic or physical features?		XX			<u>.</u>	
d. Changes in siltation, deposition or erosion patterns that may modify the channel of a river or stream or the bed or shore of a lake?			XX Short-term			XX Short-term
e. Exposure of people or property to earthquakes, landslide, ground failure, or other natural hazard?		XX				
f. Other:		none				

PHYSICAL ENVIRONMENT	UNKNOWN	NO IMPACTS	IMPACTS MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED	COMMENT
2. <u>AIR</u> RESOURCES			kumadaa uu s			
Will the proposed action result in:		#F >		MA CONTRACTOR	1 4 <u>72</u> 8	
a. Emission of air pollutants or deterioration of ambient air quality? (also see 13 (c))	es di Associa	xx	Same and the same			ulika Poli
b. Creation of objectionable odors?		XX				
c. Alteration of air movement, moisture, or temperature patterns or any change in climate, either locally or	A 1986 10 10 10 10 10 10 10 10 10 10 10 10 10	XX				
regionally?		1				
d. Adverse effects on vegetation, including crops, due to increased emissions of pollutants?		хх	343	18		A CATALON CATALON
e. For P-R/D-J projects, will the project result in any discharge, which will conflict with federal or state air quality regulations? (Also see 2a)		XX N/A				
f. Other:		none		and the second of the second o	and the same of the	

PHYSICAL ENVIRONMENT	UNKNOWN	NO IMPACTS	IMPACTS MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED	COMMENT
3. WATER RESOURCES  Will the proposed action result in:					-	
a. Discharge into surface water or any alteration of surface water quality including but not limited to temperature, dissolved oxygen or turbidity?			XX Short-term			XX Short-term
b. Changes in drainage patterns or the rate and amount of surface runoff?		XX		A		7 73 52 1 1 3 1 189
c. Alteration of the course or magnitude of flood water or other flows?		xx		4		97 - 36 10 - 18 V
d. Changes in the amount of surface water in any water body or creation of a new water body?		XX	1		le a S	
e. Exposure of people or property to water related hazards such as flooding?		xx			The state of the s	406 6
f. Changes in the quality of groundwater?		XX		j 8-		
g. Changes in the quantity of groundwater?		XX				V
h. Increase in risk of contamination of surface or groundwater?		XX				
i. Effects on any existing water right or reservation?		XX				
j. Effects on other water users as a result of any alteration in surface or ground-water quality?		хх				
k. Effects on other?		none				

PHYSICAL ENVIRONMENT	UNKNOWN	NO IMPACTS	IMPACTS MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED	COMMENT
4. <u>VEGETATION</u> <u>RESOURCES</u>	ž.			a de la companya de l	ŧ	2327/2
Will the proposed action result in:	;			* 1		energy (for the control of the contr
a. Changes in the diversity, productivity or abundance of plant species (including trees, shrubs, grass, crops, and aquatic plants)?	U 1	XX	er Winds		ig opins ig opins ig opins i opins i pe s s	
b. Alteration of a plant community?		ХХ	Ì	A.A.	300 mg	(2 1 1 2 3 전 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1 2 1
c. Adverse effects on any unique, rare, threatened, or endangered species?		XX	As a second	- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1	20 S	TERCTURE E Name
d. Reduction in acreage or productivity of any agricultural land?		XX			1 7776	
e. Establishment or spread of noxious weeds?		XX			, 4, 3, 1	
f. For P-R/D-J, will the project affect wetlands, or prime and unique farmland?		XX N/A		e garan	- 100 · 1	n
g. Other:	10 8A40 A2 1 11 11 1 1 1	none		to one of the second		

5. FISH/WILDLIFE RESOURCES  Will the proposed action result in:  a. Deterioration of critical fish or wildlife habitat?  b. Changes in the diversity or abundance of game animals or bird species?  c. Changes in the diversity or abundance of nongame species?  d. Introduction of new species into an area?  e. Creation of a barrier to the migration or movement of animals?		XX XX XX			
a. Deterioration of critical fish or wildlife habitat?  b. Changes in the diversity or abundance of game animals or bird species?  c. Changes in the diversity or abundance of nongame species?  d. Introduction of new species into an area?  e. Creation of a barrier to the migration or movement of animals?		xx			
b. Changes in the diversity or abundance of game animals or bird species?  c. Changes in the diversity or abundance of nongame species?  d. Introduction of new species into an area?  e. Creation of a barrier to the migration or movement of animals?		xx			
or abundance of game animals or bird species?  c. Changes in the diversity or abundance of nongame species?  d. Introduction of new species into an area?  e. Creation of a barrier to the migration or movement of animals?		xx			
or abundance of nongame species?  d. Introduction of new species into an area?  e. Creation of a barrier to the migration or movement of animals?	i i	(in contract)			
e. Creation of a barrier to the migration or movement of animals?		XX			
the migration or movement of animals?		1	XX	g es constitue	se transfer dell
		XX	1903 <sup>5</sup>		
f. Adverse effects on any unique, rare, threatened, or endangered species?		XX			
g. Increase in conditions that stress wildlife populations or limit abundance (including harassment, legal or illegal harvest or other human activity)?		хх			
h. For P-R/D-J, will the project be performed in any area in which T&E species are present, and will the project affect any T&E species or their habitat? (Also see 5f)		XX N/A			
I. For P-R/D-J, will the project introduce or export any species not presently or historically occurring in the receiving location?  (Also see 5d)		XX N/A			
j. Other:		none			**************************************

ENVIRONMENT		IMPACTS	MINOR	SIGNIFICANT	BE MITIGATED	INDEX
6. <u>NOISE/ELECTRICAL</u> <u>EFFECTS</u>	10 Jan 10	13.09	013 	C PAGE	ped :	
Will the proposed action result in:					1	
a. Increases in existing noise levels?		XX	1	1	n espeta	
b. Exposure of people to serve or nuisance noise levels?		xx				Collective of the collective o
c. Creation of electrostatic or electromagnetic effects		хх				
that could be detrimental to human health or property?					67476-30°	militari yana ka militari massa Manareta
d. Interference with radio or television reception		XX			worl Care	tidas seguin seguin
and operation?		-	L.			
e. Other:		none				al 51 to 21 at 2

HUMAN ENVIRONMENT	UNKNOWN	NO IMPACTS	IMPACTS MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED	COMMENT INDEX
7. LAND USE  Will the proposed action result in:	10 1 10 1 10 1 10 1 10 1 10 1 10 1 10		4		5	
a. Alteration of or interference with the productivity or profitability of the existing land use of an area?	1	хх			10 10 10 10 10 10 10 10 10 10 10 10 10 1	
b. Conflicted with a designated natural area or area of unusual scientific or educational importance?		хх			80 Sp. 1	HERE CONTROL HERE OF CHARACTER HERE OF CHARACTER HERE OF CHARACTER STOCK CARE
c. Conflict with any existing land use whose presence would constrain or potentially prohibit the proposed action?		xx				
I. Adverse effects on or relocation of residences?	2 v. · · · · · · · · · · · · · · · · ·	xx	in a Booker - see	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	. A	
e. Other:	2 - 2	none			1018	
1	1				gillon del matteria	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

HUMAN ENVIRONMENT	UNKNOWN	NO IMPACTS	IMPACTS MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED	COMMENT INDEX
8. <u>RISK/HEALTH</u> HAZARDS	) )			1	action in	
Will the proposed action result in:	ed (1990) 1 GV is no selection					
a. Risk of an explosion or release of nazardous substances (including, but not	1	хх			1911 J. 1811	the second secon
imited to oil, poesticides, chemicals, or radiation) in the event of an accident or other forms of disruption?	1					DESTINATION OF THE PROPERTY OF
o. Affect an existing emergency response or emergency evacuation plan or create a need for a new plan?		ХХ			a visa ea	PART PART PART PART PART PART PART PART
c. Creation of any numan health hazard or potential hazard?	1890 S - S - DC - NOS	XX		987-0	7 - 8: 7 4	Maria de la Maria della
d. For P-R/D-J, will any chemical toxicants be used? (Also see 8a)	way was a second	XX N/A				
e. Other:		none				

HUMAN ENVIRONMENT	UNKNOWN	NO IMPACTS	IMPACTS MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED	COMMENT
9. COMMUNITY IMPACTS  Will the proposed action result in:			9		alizan	
a. Alteration of the location, distribution, density, or growth rate of the human population of an area?		XX			2- 838 64 2 2 3 4 5 5 6 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	
b. Alteration of the social structure of a community?	-	XX	0.		10 million ( mil	
c. Alteration of the level or distribution of employment or community or personal income?		xx			1. The 1. The 1.	
d. Changes in industrial or commercial activity?		XX	3		as en year	
e. Increased traffic hazards or effects on existing transportation facilities or patterns of movement of people and goods?		ХX				
f. Other:		none				
	2	1			10 N CONT.	1901 3.20p

HUMAN ENVIRONMENT	UNKNOWN	NO IMPACTS	IMPACTS MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED	COMMENT
10. <u>PUBLIC SERVICES,</u> TAXES and UTILITIES				1	TIR	
Will the proposed action result in:					odbo odbo	A SPEACH A
result in:	n - 6	an ing community in the freeze		E.	197, 10	
a. Will the proposed action have an effect upon or result in a need for new or altered governmental services in		xx			Janes Janes J. Balan Maran Marsh Jan	Collection of the collection o
any of the following areas: fire or police protection, schools, parks/recreational					39 M	tem d
facilities, roads or other public maintenance, water supply, sewer or septic systems, solid waste disposal, health, or other governmental		1			Sender da N	The first of the second of the
services? If any, specify:					- 190	, , , , , , , , , , , , , , , , , , ,
b. Will the proposed action have an effect upon the local or state tax base and revenues?		XX	- Property		netimosa mater	
c. Will the proposed action result in a need for new facilities or		XX	e una serie			
substantial alterations of any of the following utilities: electric power, natural gas, other fuel		W AD 1		b	1	
supply or distribution systems, or communications?						
d. Will the proposed action result in increased used of any energy source?		хх				
e. Other:		none			y	
HUMAN ENVIRONMENT	UNKNOWN	NO IMPACTS	IMPACTS MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE	COMMENT

						MITIGATED	
11. AESTHETICS/RECREA TION Will the proposed action result in:	mivita ji tara			(s) (s)			
a. Alteration of any scenic vista or creation of an aesthetically offensive site or effect that is open to public view?		XX		400 0	1	33.00	
b. Alteration of the aesthetic character of a community or neighborhood?		XX	1		E L		
c. Alteration of the quality or quantity of recreational opportunities and settings?	angery are a gray	XX					
d. For P-R/D-J, will any designated or proposed wild or scenic rivers, trails or wilderness areas be impacted? (Also see 11a, 11c)		XX N/A					
e. Other:	3	none				i i	10 to to
				F .			

				e access of the contract of th	e a game	
HUMAN ENVIRONMENT	UNKNOWN	NO IMPACTS	IMPACTS MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED	COMMENT INDEX
12. CULTURAL/HISTORICAL RESOURCES  Will the proposed action result in:		30000		**************************************	1 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1	
Destruction or alteration of any site, structure or object of prehistoric historic, or paleological importance?		XX		ŽŠ.	1,20	xx
b. Physical change that would affect unique cultural values?		XX				Properties to a service of the servi
c. Effects on existing religious or sacred uses of a site or area?		ХХ		A	<u>.</u> 6	
d. For P-R/D-J, will the project affect historic or cultural resources? Attach SHPO letter of clearance. (Also see 12.a)	20 000 00	XX N/A			t gg gall	
e. Other:		none				Q
				- 10 To - 10 T		

ENVIRONMENTAL SUMMARY	UNKNOWN	NO IMPACTS	IMPACTS MINOR	POTENTIALLY SIGNIFICANT	CAN IMPACTS BE MITIGATED	COMMENT
13. SUMMARY EVALUATION OF SIGNIFICANCE  Will the proposed action result in:	od toog (j.g. odko do M oji o too da oji mata ala	alforma e kalah lik dolon lik dolon lik dela		g alton con general grafton con general mission en en e fostagi en en con contra ignar		
a. Have impacts that are individually limited, but cumulatively considerable? (A project or program may result in impacts on tow or more separate resources, which create a significant effect when considered together or in total.)		XX				
b. Involve potential risks or adverse effects which are uncertain but extremely hazardous if they were to occur?		XX	200	carties, for	<u> </u>	
c. Potentially conflict with the substantive requirements of any local, state, or federal law, regulation, standard or formal plan?		xx				
d. Establish a precedent or likelihood that future actions with significant environmental impacts will be proposed?		хх	,			
e. Generate substantial debate or controversy about the nature of the impacts that would be created?		ХХ				
f. Other:		none				

#### **Comment Index Items**

Narrative Description and Evaluation of the Cumulative and Secondary Effects on Land Resources (Attach additional pages of narrative if needed):

- 1.d. A temporary increase in stream turbidity will occur during project implementation. To minimize sediment inputs during construction, soil fences will be used, work will commence during low or winter flows, in-channel modifications will be minimized and disturbed areas will be immediately sodded or reseeded. Long-term benefits of channel reconstruction include improved sediment transport and decreased sediment inputs to Beaver Creek and Rock Creek.
- 3.a. A temporary increase in stream turbidity will occur during project implementation. To minimize sediment inputs during construction, soil fences will be used, work will commence during low or winter flows, in-channel modifications will be minimized and disturbed areas will be immediately sodded or reseeded.
- 12.a. MFWP and the Natural Resources Conservation Service (NRCS) will conduct a cultural resources evaluation before construction to ensure that the project will have no impacts to, or alterations of, cultural resources.

#### **Closing Statements**

- 1. Alternative descriptions and mitigation considerations:
  - a. No action alternative:

This alternative would be implemented by not taking any actions on the proposed channel reconstruction and fish habitat restoration plan. The likely outcome of this alternative would be continual damage to fish habitat, continual fragmentation of the Upper Willow Creek basin, continual loss of a spawning tributary to Rock Creek trout, increased bank erosion, additional sediment inputs Rock Creek and loss of potential fishing opportunities in Beaver Creek and Rock Creek.

- 2. Description and analysis of reasonable alternatives (including the no action alternative) to the proposed action whenever alternatives are reasonably available and prudent to consider and a discussion of how the alternatives would be implemented:
  - a. No action alternative:

This alternative would be implemented by not taking any actions on the proposed channel reconstruction and fish habitat restoration plan. The likely outcome of this alternative would be continual damage to fish habitat, continual fragmentation of the Upper Willow Creek basin, continual loss of a spawning tributary to Rock Creek trout, increased bank erosion, additional sediment inputs to the Rock Creek and loss of potential fishing opportunities in Beaver Creek and Rock Creek.

#### b. Preferred alternative:

This preferred alternative is the restoration effort. Past land use practices have contributed to fragmentation, bank instability, habitat loss and reduced fish populations in Beaver Creek and Rock Creek.

3. Evaluation and listing of mitigation, stipulation, or other control measures enforceable by the agency or another government agency:

All permits will be obtained prior to construction. ESA consultation with the USFWS has been completed.

4. Based on the significance criteria evaluated in this EA, is an EIS required? YES / NO If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action:

No Environmental Impact Statement (EIS) is required for this project. The proposed action represents an enhancement in ecosystem components and the human

environment. This review has clearly shown that the impacts associated with this project are insignificant. The positive corrective nature of this project with minimal impacts make an EA the appropriate level of analysis.

5. Describe the level of public involvement for this project if any and, given the complexity and the seriousness of the environmental issues associated with the proposed action, is the level of public involvement appropriate under the circumstances?

Only limited public involvement is planned. The landowner, MFWP, DNRC, USFWS, and NRCS have approved all actions. This project is consistent with other restoration efforts in the Clark Fork River Basin. Review of the final designs will be by the landowner, MFWP and DNRC.

- 6. Duration of comment period if: 30 days
- 7. Name, title, address and phone number of the Person(s) Responsible for Preparing the EA:

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